PATENT DOCKET 206,388

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	SCALA, VINCENT	Corresponding and Claiming Priority to French Appln. No. 02/15824, filed December 13, 2002
SERIAL NO:	Not Yet Assigned	
FILED:	Concurrently herewith	
TITLE:	BLADE PITCH CONTROL STAR DEVICE FOR A ROTORCRAFT ROTOR	

STATEMENT OF FILING BY EXPRESS MAIL 37 C.F.R. § 1.10
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PRE-EXAMINATION AMENDMENT

Commissioner for Patents
Alexandria, VA 22313-1405

Dated: December 12, 2003

Sir:

In connection with the above-identified application which is being filed concurrently herewith, please amend the application as follows:

IN THE SPECIFICATION:

At page 17, replace the first full paragraph from lines 6-12 with the following paragraph:

-- A translation and tilting guide mechanism of this type, with a universal joint and a universal joint ring mounted to turn within the non-rotating star, on the one hand, and on the other on the two slides sliding parallel to the rotor axis on the fixed columns, described with respect to figures 5 and 6 of U.S. Patent No. 6,280,141, which gives more details on this subject. The translation and tilting guide mechanism partially represented in figure 9 of this [request] application can be obtained as described in the aforementioned U.S. Patent No. 6,280,141, the disclosure of which is incorporated herein by reference and made a part of this disclosure. The disclosure of U.S. Patent No. 6,033,182, is also incorporated herein by

reference and made a part of this disclosure. --

IN THE CLAIMS:

Please amend the claims, as follows:

1. (Original) A cyclic star device to control the pitch of rotorcraft rotor (1) blades (2), such as a main helicopter rotor, a rotor (1) on which each blade (2) is, on the one hand, driven in rotation about an axis of rotation (Z-Z), of a rotor (1) shaft (3) through a hub (4) integral in rotation with shaft (3), and on the other hand, integral in rotation about a longitudinal pitch change axis (A-A) of blade (2) of at least one pitch lever (5) controlled by a corresponding pitch connecting rod (6), said device (10') being of the type with two annular and coaxial stars (12', 14') enclosing rotor (1) axis (Z-Z) and mounted on an axial and tipping translation guide mechanism (11') of said stars with respect to rotor axis (Z-Z), and of which one is a rotating star (12') connected, on the one hand to said hub (4) and/or said shaft (3) by at least one device driving (13) the rotating star (12') to rotate with rotor (1) about its axis (Z-Z) and, on the one hand, each blade (2) by the corresponding pitch connecting rod (6), said rotating star (12') being mounted in rotation by at least one bearing (21') on the other star, which is a non-rotating star (14') connected, on the one hand, to the structure (15) of said rotorcraft by at least one retaining device (16) immobilizing said non-rotating star (14') in rotation about said rotor axis (Z-Z), and on the other, pilot control devices (17) soliciting the non-rotating star (14') in such a way that the axial and/or tilting translation movements imposed on the non-rotating star (14') from the pilot controls (17) are followed by the rotating star (12'), which transmits the pitch to be set on the rotor (1) blades (2) by means of pitch connecting rods (6), with said rotating star (12') comprising a modular set of interconnecting fittings (46) attached rigidly (45) and removably to an annular device (31') to ensure links between this rotating star and the pitch

connecting rods (6) and/or said at least one driving device (13), characterized in that said non-rotating star (14') includes a modular set of link fittings (42) attached rigidly (41) and removably to an annular device (30') to ensure the links between this non-rotating star and the pilot control devices (17) and/or said at least one retaining device (16).

2. (Original) Cyclic star device according to claim 1, characterized in that said modular assembly of fittings linking said non-rotating star (14') includes the first non-rotating link fittings (42) identical to one another in equal numbers to said pilot control devices (17), and of which each connects said non-rotating star (14') to respectively one of said pilot control devices (17), and/or said modular set of link fittings of said rotating star (12') includes the first rotating link fittings (46) identical to one another in equal numbers to said pitch connecting rods (6), and each of which connects said rotating star (12') to respectively one of the pitch connecting rods (6).

3. (Original) Cyclic star device according to claim 2, characterized in that said modular set of link fittings to said non-rotating star (14') includes at least one second non-rotating link fitting in equal numbers to at least one said retaining device (16) to connect said non-rotating star (14') to at least one retaining device (16), and/or said modular set of link fittings to said rotating star (12') including at least a second rotating link fitting (49) in numbers equal to at least one driving device (13) to connect said rotating star (12') to at least one said driving device (13).

4. (Currently Amended) Cyclic star device according to [any one of claims 2 to] claim 3, characterized in that said annular device of at least one of stars (14', 12') comprises respectively one of internal rings (30') and external rings (31') of the rotary assembly

of rotating star (12') on non-rotating star (14).

5. (Currently Amended) Cyclic star device according to [any one of claims 1 to] claim 4, characterized in that said annular device comprising at least on star (12', 14') is an intermediate ring, force-fitted with one of internal rings (30') and external rings (31') of said bearing (21').

6. (Currently Amended) Cyclic star device according to [any one of claims 1 to] claim 5, characterized in that the link fittings (42, 46-49) of a same star (14', 12') are attached to said annular device (30', 31') of said star by means of a collar (40, 41) integral with said annular device (30', 31') and to which said link fittings (42, 46-49) are each fitted separably.

7. (Original) Cyclic star device according to claim 6, characterized in that each link fitting (42, 46-49) of a modular set is bolted (41, 45) onto corresponding collar (40, 44).

8. (Currently Amended) Cyclic star device according to [any one of claims 1 to] claim 7, characterized in that each interconnecting fitting (42, 46-49) has a plane shape that is more or less triangular with one side forming a concave circle arc arranged as an attaching base to part of the perimeter of said corresponding annular device or said corresponding collar (40, 44), while the apex opposite said concave side is arranged to form a yoke (43, 47) or an end-fitting accommodating a swivel end of a pitch connecting rod (6) or a pilot control device (17) or driving device (13) or retaining device (16) corresponding to it.

9. (Currently Amended) Cyclic star device according to [any one of claims 6, 7 and] claim 8, as attached to one of claims 6 and 7, characterized in that ring (31') of

bearing (21'), which is linked in rotation with the rotating star (12'), is integral with an upper collar (44) protruding more or less radially toward the outside of bearing (21') from the upper axial end of said ring (31') linked with the rotating star (12') and with respect to rotor axis (Z-Z), whereas the other bearing (21') ring (30') linked with the non-rotating star (14') is integral with a lower collar (40) protruding more or less radially toward the outside of bearing (21') from the lower axial end of said other ring (30') linked with non-rotating star (14').

10. (Currently Amended) Cyclic star device according to claim 9 [as attached to claim 2], characterized in that each pilot control device (17) is connected by a swivel-mounted link to respectively one of said first non-rotating link fittings (42) attached removably to said lower collar (40) and/or each pitch connecting rod (6), connected by a swivel-mounted link to respectively one of the first rotating link fittings (46) attached removably to said upper collar (44).

11. (Currently Amended) Cyclic star device according to claim [according to one of claims 9, as attached to claim 2 and] 10, characterized in that at least one of said retaining devices (18) is connected by a swivel-mounted link to a second non-rotating link fitting respectively attached removably to said lower collar (40) and/or at least one said driving device (13) is connected by a swivel-mounted link to a second rotating link fitting (49) respectively attached removably to said upper collar (44).

12. (Currently Amended) Cyclic star device according to [any one of claims 1 to] claim 11, characterized in that the interconnecting fittings (42, 46-49) of at least one modular set are made of aluminum alloy or of a composite material using an aluminum or titanium metal matrix from forged or dye-punched blanks or plates.

13. (Currently Amended) Cyclic star device according to [any one of claims 1 to] claim 12, characterized in that one (30') of bearing rings (21'), integral with one of the two non-rotating stars (14') and rotating stars (12') connected to said translation and tilting guide mechanism (11') is subdivided into two half-rings (30'a, 30'b) placed axially end to end, and each of which is provided respectively with two adjacent radial collars (50a, 50b), clamped (39) endwise against one another to ensure the pre-stressing of bearing (21') and to which said star (14') is attached to said translation and tilting guide mechanism (11').

14. (Currently Amended) Device according to [any one of claims 1 to] claim 13, characterized in that the said translation and tilting guide mechanism (11') includes a central swivel (18'), centered on rotor axis Z-Z) on which the non-rotating star (14') is assembled to oscillate by at least one plate (19') with a spherical cap bearing surface, with said swivel (18') being mounted to slide parallel to the rotor axis (Z-Z) about which cylindrical guide (20') coaxial with rotor axis (Z-Z) and not rotating about said rotor axis (Z-Z) and preferably attached with respect to the structure (15) of the rotorcraft.

15. (Currently Amended) A device according to [any one of claims I to] claim 13, characterized in that said translation and tilting guiding mechanism includes a universal joint link, with a universal joint ring (51) mounted so as to pivot on the one hand about a first diametrical axis, perpendicular to the rotor axis (Z-Z) by two swiveling links (54) mounted coaxially on two sides (55) each guided in axial translation on respectively one of the two guide columns parallel to the rotor axis (Z-Z) and symmetrical with respect to one another compared to said axis (Z-Z), in the same diametrical plane passing through the latter and, on the other hand, about a second diametrical axis, perpendicular to the first diametrical axis, by two